

Claims:

1. A photovoltaic device, including a photovoltaic element including a plurality of layers of film, and an envelope, at least a portion of the envelope having a curved profile; wherein the photovoltaic element is comprised of layers of film and is formed on the inside surface of the envelope.
2. A photovoltaic device in accordance with claim 1, wherein the envelope forms a dome containing the device.
3. A photovoltaic device in accordance with claim 2, wherein the dome is mounted on a substrate forming a base of the dome.
4. A photovoltaic device in accordance with claim 1, wherein the envelope is in the form of a sphere.
5. A photovoltaic device in accordance with any one of the preceding claims, further including an electronic apparatus mounted within the envelope and being electronically connected to the photovoltaic element, the photovoltaic element being arranged to provide electric power to the electronic apparatus.
6. A photovoltaic device in accordance with claim 5, the electronic apparatus including a transmitter.
7. A photovoltaic device in accordance with claim 6 further including an antenna connected to the transmitter, the antenna being formed by a conductive region of the envelope.
8. A photovoltaic device in accordance with claim 6, further including an antenna connected to the transmitter, the antenna including a conductive member extending outwardly from the envelope.
9. A photovoltaic device in accordance with any preceding claim further including an energy storage device.
10. A photovoltaic device in accordance with claim 9, the energy storage device being in the form of a thin layers formed proximate the layers of the photovoltaic element.
11. A photovoltaic device in accordance with any preceding claim further including a sensor.

12. A photovoltaic device in accordance with claim 11, the sensor extending outwardly of the envelope.

13. A photovoltaic device in accordance with any preceding claim, in the form of a mote arranged to provide information
5 about an environment.

14. A photovoltaic device in accordance with claim 13, the device being enclosed in a resilient cover.

15. A photovoltaic device in accordance with either claim 13 or claim 14, having an outer shape which is aerodynamic.

10 16. A photovoltaic device in accordance with any one of claims 13, 14 or 15, further including means for orienting the device.

17. A photovoltaic device in accordance with claim 16, wherein the orienting means includes a predetermined centre of gravity of the device.

15 18. A photovoltaic device in accordance with claim 17, wherein the orienting means includes a projection projecting outwardly of the device.

19. A photovoltaic device in accordance with claim 16, the orienting means including an adhesive portion on an outer
20 surface of the device.

20. A photovoltaic device in accordance with any one of claims 1 to 4, the device being mounted on a substrate and being electrically connected to the substrate.

21. A photovoltaic device in accordance with claim 20,
25 including a channel through the envelope to a conductive layer of the device and a conductor connecting the conductive layer to the substrate.

22. A photovoltaic device in accordance with either of claim 20 or 21 wherein the substrate includes a grid of conductors and the photovoltaic device is electrically connected to the
30 grid.

23. A photovoltaic device in accordance with any one of claims 20 to 22, wherein the substrate includes a depression, and the photovoltaic device is mounted within the depression.

24. A photovoltaic device in accordance with any one of claims 20 to 23, the substrate including reflective means to reflect radiation incident on the substrate towards the device.

5 25. A photovoltaic device in accordance with any one of the preceding claims, wherein the photovoltaic element is a thin film photovoltaic element.

26. A photovoltaic device in accordance with claim 25, wherein the thin film photovoltaic element is a Dye Solar Cell (DSC) element.

10 27. A photovoltaic device in accordance with claim 26, wherein an internal electrode of the DSC element comprises carbon.

28. A photovoltaic device in accordance with claim 26 wherein the device stores a reservoir of electrolyte to provide an electrolyte supply to an electrolyte layer of the DSC device.

15 29. A photovoltaic device in accordance with any one of the preceding claims, a resilient material being provided within the device to secure elements of the device and provide mechanical rigidity.

20 30. A photovoltaic device substantially as herein described with reference to the accompanying drawings.